MAR 20070003: BASELINE RIDGE

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GRAYMONT WESTERN CANADA INC.

2006 EXPLORATION AND FIELDWORK AT THE BASELINE RIDGE METALLIC AND INDUSTRIAL MINERALS PERMIT, WEST-CENTRAL ALBERTA

PART B

Metallic and Industrial Minerals Permit 9301010011

Geographic Coordinates

52°09' N to 52°19' N 115°29' W to 115°40' W

NTS Sheets 83 B/03, B/04 and B/05

Owner and Operator:

MAIM Permit 9301010011 Graymont Western Canada Inc.

Lime Divisional Office 190, 3025 - 12 Street N.E. Calgary, AB, T2E 7J2

Consultant:

Dahrouge Geological Consulting Ltd.

18, 10509 - 81 Avenue Edmonton, Alberta T6E 1X7

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Date Submitted:

March 15, 2007

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1. SUMMARY

During late September and early October, 2006, the northern part of Clearwater Range, west of Rocky Mountain House and within Metallic and Industrial Minerals (MAIM) Permit 9301010011, was explored for high-quality carbonate rocks. Exploration conducted in 2006 was a follow-up to previous exploration conducted at Baseline Ridge in 2001, 2002 and 2004.

Throughout this report attitudes of bedding and other planar features are given as A°/B° SW, where A° is the azimuth of the strike and B° is the amount of dip in the direction indicated. A magnetic declination of 17° east was used. Where bedding has been obscured by structure, stratigraphic thicknesses were calculated using orientations from adjacent units. Where more than one bedding orientation was measured, the mean orientation is used.

During the fall of 2006, exploration expenditures for MAIM permit 9301010011 totaled \$36,134.26, calculated from the spent amount of \$32,849.33, plus the allowable 10 per cent for overhead management fees of \$3,284.93.

Excess expenditures of \$5,626 were previously credited from 'Years 3 and 4' towards the current assessment period. Hence, the combined expenditures including prior and current accumulations total \$41,760.26.

Based on a permit area of 2,832 hectares and assessment requirements of \$10 per hectare, the required expenditures to keep the entirety of the permit in good standing are \$28,320. The balance of expenditures are to be assigned to future assessment period 'Years 7 and 8'.

Expenditures are allocated to MAIM Permit 9301010011 as follows:

Permit	Assessment Period	Expiry Date	Required Expenditures	Assigned Expenditures
9301010011	Years 5 and 6	2007-01-15	\$28,320	\$28,320.00
	Years 7 and 8	2009-01-15	\$36,000	\$13,440.26
			Total:	\$41,760.26

2. INTRODUCTION

The 2006 exploration at the Baseline Ridge Permit was conducted by Dahrouge Geological Consulting Ltd. on behalf of Graymont Western Canada Inc. (Graymont). This assessment report describes the exploration conducted within metallic and industrial minerals permit 9301010011, which encompasses the northern part of Clearwater Range of the Alberta Foothills. Bob Robison, exploration manager for Graymont Western U.S. Inc., authorized this work.

The objectives of the 2006 exploration were to expand on the previously explored areas to locate high-quality carbonate rocks throughout and within the permit area. This report includes information on the geology and structure of more than five stratigraphic sections examined in fall 2006, as well as interpretation of the results.

3. GEOGRAPHIC SETTING

3.1 LOCATION AND ACCESS

MAIM Permit 9301010011 encompasses the northern parts of Clearwater Range (Table 3.1). It includes lands to the northwest of the quarry of Prairie Creek Quarries Ltd. on Baseline Ridge to Ram River and Tawadina Ridge, within west-central Alberta (Fig.'s 3.1, 3.2 and 3.3). The quarry of Prairie Creek Quarries Ltd. is approximately 10 km from the south end of Baseline Ridge.

The northern part of Clearwater Range lies within Prairie Creek and Ram-Clearwater Resource Management areas (Alberta Forestry and Wildlife 1986 and 1988), and is mostly within Multiple Land Use Zone 5. The northern parts of Baseline Ridge along Ram River, Fall Creek and Prairie Creek are within Critical Land Use Zone 2.

Parts of Baseline Ridge north of Prairie Creek are 50 km southwest of Rocky Mountain House along secondary highway 752 (Fig. 3.3). About 1 km east of Baseline Ridge an unimproved gravel road branches to the north from highway 752. About 1½ km along this road is a "T" intersection where the west fork leads to the Prairie Creek Quarry and the east fork to the northeastern flank of Baseline Ridge. Approximately 2½ km along the eastern fork, erosion bars make the road passable only to all-terrain vehicles (ATV's). The road then continues to the northwest for over 10 km to Chelsea Creek. Access to the western flank of Baseline Ridge is via an 11 km gravel road that branches northwest from secondary highway 752 to Fall Creek. From Fall Creek, bush trails and cut lines provide ATV access to various portions of the property.

Ram River and Tawadina Ridge, within the northern parts of Clearwater Range, are accessible via secondary highway 752 and north on Northfork Road, an improved gravel road 25 km southwest of Rocky Mountain House. The Northfork Road continues to the west and northwest for approximately 40 km to a private, all-weather logging road belonging to Sunpine Forest Products Ltd. The Sunpine Road continues to the southeast for approximately 32 km to secondary highway 752; both the north and south ends of the road are commonly barred by gates. A network of logging roads and cutlines that branch from or cross the Sunpine Road provide good access to the Ram River and Tawadina Ridge areas.

Climate is sub-alpine with average summer temperatures of 20° to 25°C and winter temperatures of -15° to -20°C, with extremes of 35°C and -40°C. Rainfall averages about 35 cm per year with maximum snowfall in December and January, which averages 35 to 45 cm.

Several creeks, mountains, and other features presently without names on published maps have been assigned informal names in this report to facilitate references to geographic locations.

TABLE 3.1 DESCRIPTION OF MAIM PERMIT 9301010011

Permit	Comm. Date	Expiry Date	Land Description	Size (Ha)
9301010011	Jan. 15, 2003	Jan. 15, 2007	37-11W5 (Sections 19L16; 20N,SE,L6; 21; 29; 30N,SE,L3,L5,L6; 31) 37-12W5 (Sections 25NE,L7,L8,L11,L14; 35L16; 36N,SE,L3,L6) 38-12W5 (Sections 1SW,L2,L11-13; 2N,SE; 3L9,L15,L16; 9L8,L9,L16; 10NW,SE,L3, L5,L6,L9,L10,L15; 11L1-L5; 12L4,L6, L11,L14; 13NE,L3,L6,L13,L14; 23NE, L1,L7,L8,L14; 24L2-L5; 26SW,L2,L7, L11,L12)	2,832

3.2 INFRASTRUCTURE

Accommodations, food, fuel and other necessary services are available in Rocky Mountain House. The local economy is primarily based on agriculture, forestry, and energy-based industries.

Rocky Mountain House, with a population of about 6,500, is accessed by traveling about 67 km west of Red Deer along the David Thompson Highway (Highway 11), and then 12 km north along Highway 22.

4. WORK PERFORMED

From September 28 to October 2, 2006, Dahrouge Geological Consulting Ltd., on behalf of Graymont Western Canada Inc., conducted exploration for carbonate lithotypes within west-central Alberta. The work was undertaken to determine and identify the location and extent of carbonate outcrops in difficult-to-access areas of the property.

A four-person crew was based in Rocky Mountain House. Access to and from the property was by helicopter and work was conducted in teams of two.

Carbonate outcrops were examined at more than 5 locations (Table 4.1, Fig. 4.1). Field maps were completed on 1:25,000 scale map sheets and concentrated on areas north and south of Ram River, along Baseline Ridge. A solution of 6% HCl was used to assess carbonate quality in the

field. Geological observations were recorded, including lithologic information, measurements of structural elements, and other pertinent details (Appendix 2). In some instances, interval thicknesses were determined by measuring outcrops perpendicular to bedding, where it could be identified.

TABLE 4.1 LOCATIONS EXAMINED AND MEASURED IN 2006 (Fig. 4.1)

Section Number	Location		Measured Intervals	Strat. Thick. (m)*	Measured Thick. (m)°
2006-01	North of Ram River		11	261/2	601/2
2006-02	North of Ram River		9	281/4	281/4
2006-03	~1.6 km NW of Fall Creek		12	27	30
Isolated	~2 km NW of Fall Creek		1	1	1
Isolated	~2 km NW of Fall Creek		1	1/2	1/2
2006-04	~1.6 km NW of Fall Creek		2	71/2	73/4
Isolated	~1.5 km NW of Fall Creek		1	11/2	11/2
Isolated	~900 m NW of Fall Creek		8	221/2	221/2
2006-05	~900 m NW of Fall Creek	TOTALS:	<u>1</u> 46	<u>4</u> 118¾	<u>4</u> 156

^{*} Stratigraphic thicknesses are examined thicknesses.

5. RESULTS

Three days were spent exploring the permit area with the use of a helicopter. One day was spent north of Ram River, and two days were spent south of Ram River atop Baseline Ridge.

Carbonate lithologies of the Rundle and Banff assemblages were examined and measured along Baseline Ridge, north and south of Ram River (Fig. 4.1, Table 4.1). A total of 46 intervals were examined at more than 5 locations, representing a stratigraphic thickness of about 118¾ m from an investigated thickness that exceeds 156 m. Where bedding could not be identified, stratigraphic measurements were taken based on the previously determined regional trend or deduced from surrounding measurements where possible (Appendix 2).

Where examined, the Rundle Assemblage included brownish-grey lime mudstones, light- to medium-grey and brownish-grey crinoidal ooid grainstones and coral bindstones. The Banff Assemblage included generally well-bedded, tan-grey, micritic mudstones and fine- to medium-grained fossiliferous crinoidal grainstones.

A portion of the Rundle-Banff geological contact along Baseline Ridge has been redefined. Further work is required in the area to confirm or challenge past geological interpretations.

Measured thicknesses are total investigated thicknesses, including covered and inaccessible intervals.

6. CONCLUSIONS

Paleozoic carbonate units of the Banff and Rundle assemblages were examined and measured along the northern part of Clearwater Range at Baseline Ridge, within MAIM Permit 9301010011. A total of 46 discrete intervals were measured and described in detail, representing approximately 1183/4 m stratigraphy.

From the helicopter, active logging roads were noted, which appear to provide improved access to the northern parts of the property. For future exploration programs, the owners of the roads should be contacted, and their locations determined.

Within MAIM Permit 93901010011, carbonate exposures remain unexamined in detail. Future exploration will expand on work already conducted in the area, confirming or redefining past geological interpretations.

7. REFERENCES

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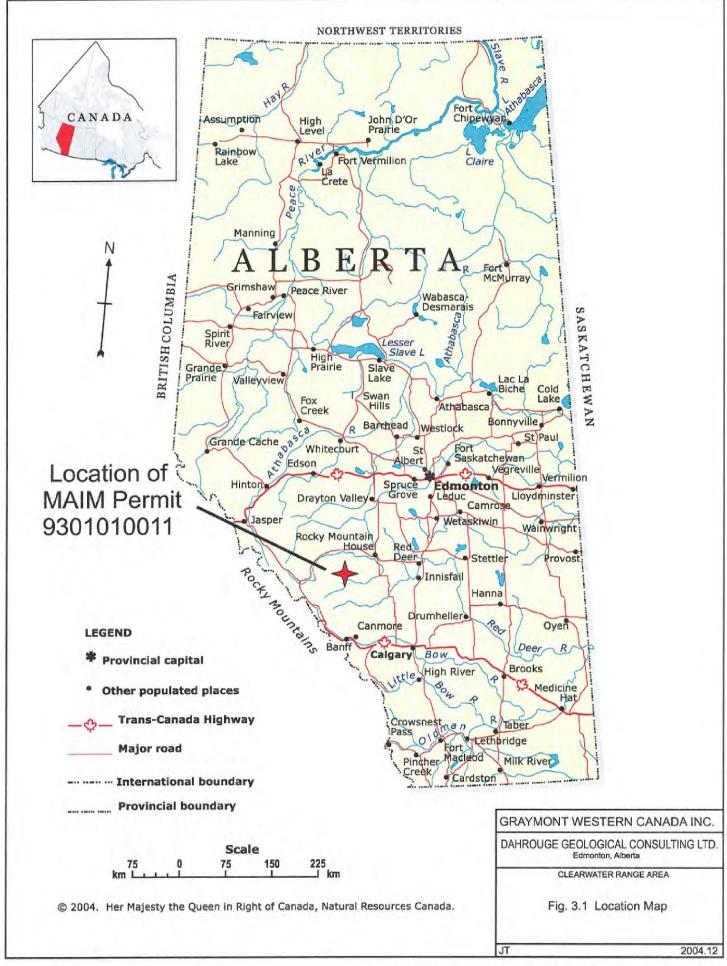
STATEMENT OF AUTHOR

- I, Jody Dahrouge, residing at 11 Country Lane, Stony Plain, Alberta, do hereby certify that:
- I am a geologist of Dahrouge Geological Consulting Ltd., Suite 18, 10509 81 Ave., Edmonton, Alberta, T6E 1X7.
- I am a graduate of the University of Alberta, Edmonton, Alberta with a B.Sc. in Geology, 1988 and a Special Certificate (Sp.C.) in Computing Science in 1994.
- I have practiced my profession as a geologist intermittently from 1988 to 1994, and continuously since 1994.
- I am a registered professional geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, member M48123.
- I hereby consent to the copying or reproduction of this Technical Report following the one-year confidentiality period.
- I am the author of the report entitled "2006 Exploration and Fieldwork at the Baseline Ridge Metallic and Industrial Minerals Permit, West-Central Alberta" and accept responsibility for the veracity of technical data and results.

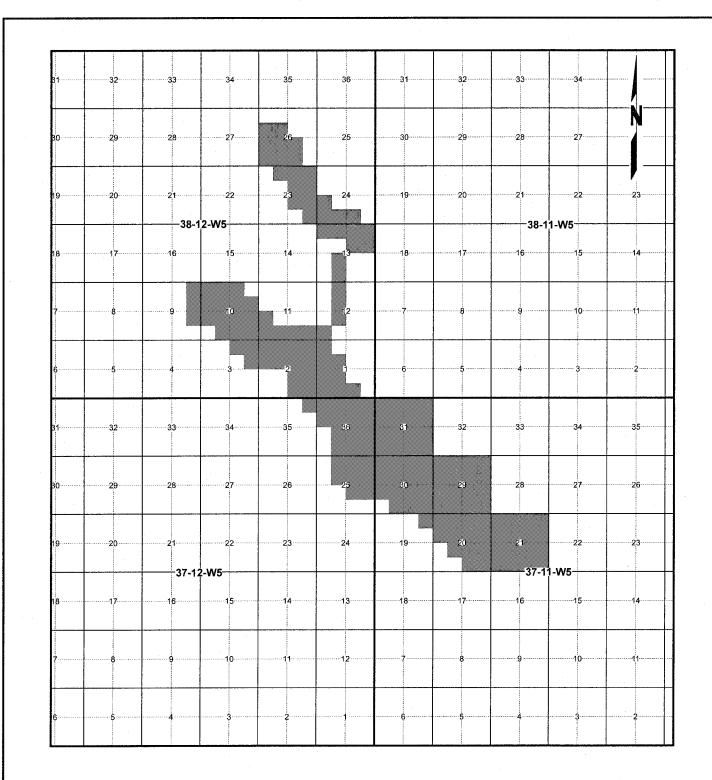
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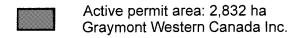
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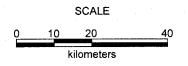
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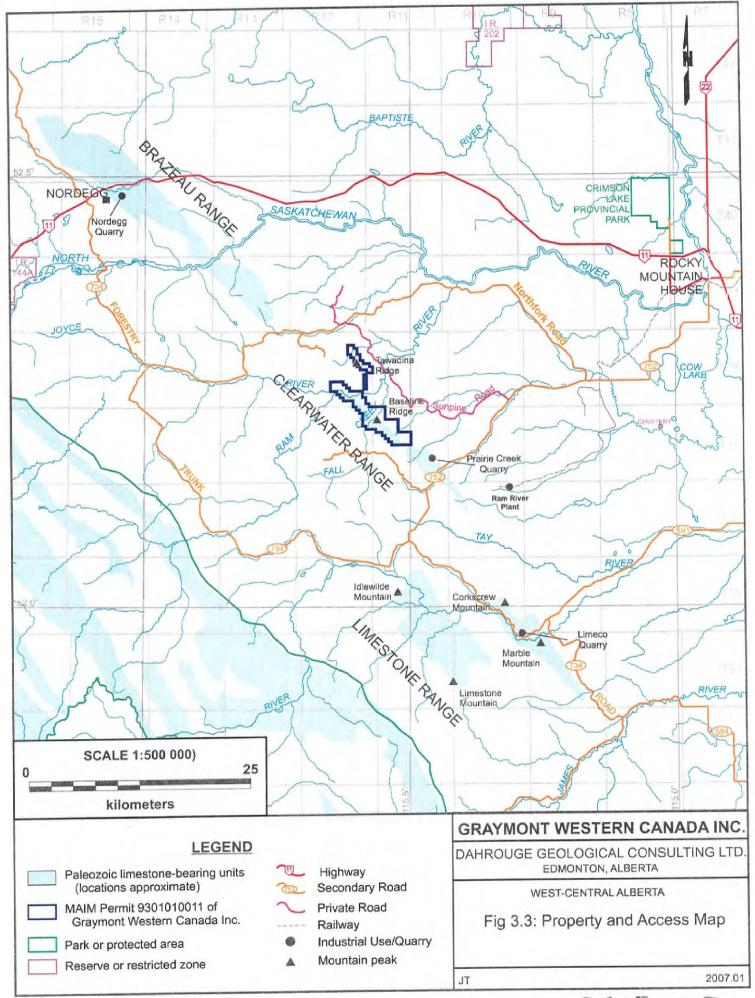
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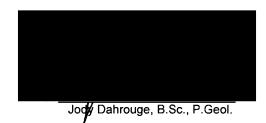
Fig. 3.2: MAIM Permit 9301010011

RW 2005.02



APPENDIX 1: 2006 STATEMENT OF EXPENDITURES MAIM PERMIT 9301010011

a) <u>Personnel</u>		\$	13,143.19
b) Food and Accommo	<u>dation</u>	\$	1,998.23
c) <u>Transportation</u>	Truck, ATV's, Helicopter	\$	16,842.75
d) <u>Instrument Rental</u>	Radio Rentals	\$	157.41
e) <u>Drilling</u>	n/a		
f) <u>Analyses</u>	n/a		
g) <u>Report</u>	Reproductions and assembly	\$	93.50
h) <u>Other</u>		\$	614.25
<u>Total</u>		\$	32,849.33
Administration (10% Total + Administration		\$ \$	3,284.93 36,134.26



Edmonton, Alberta March 15, 2007

APPENDIX 2: DESCRIPTIONS OF THE 2006 STRATIGRAPHIC SECTIONS WITHIN MAIM PERMIT 9301010011 AT BASELINE RIDGE, CLEARWATER RANGE

Notes:

Stratigraphic thicknesses are based on measured attitudes of bedding listed below, with appropriate interpolations.

Attitudes are strike and dip. Measured sections are listed in order from stratigraphic top to bottom. UTM coordinates are NAD83. Section locations are shown on Fig. 4.1.

Abbreviations:

RA - Rundle Assemblage; Banff - Banff Assemblage

Interval	Formation	Strat.	Description
	Member	Thick. (m)	Description
Section 2	<u>006-01</u> : North	of Ram Riv	ver (UTM 594445E, 5789621N)
		~40	<u>massive vertical cliff outcrop</u> , not sampled or included in measured thickness calculation
_		~10	covered, not included in measured thickness calculation
28074	RA	1¾	Dolomitic Lime Mudstone, as 28073, attitude of bedding 288°/35° N
28073	RA	2½	<u>Dolomitic Lime Mudstone</u> , medium-brownish-grey weathered, dark-brownish-grey fresh, micritic, dark-brownish-grey oozy chert and dark-grey elliptical chert nodules, moderately to well fractured, moderate reaction with HCl; top ~1/3 m: tan weathered, medium-brown fresh, micritic, thinly bedded <5 cm
-	RA	~27	covered
28072	RA	13/4	Dolomitic Lime Mudstone, medium-brownish-grey weathered, medium- to dark-grey and light-brownish-grey fresh, micritic to fine-grained, black rounded/elliptical chert nodules 1-15 cm long, good reaction with HCl, benches of outcrop, recessive area with no outcrop above, cliffs viewed at top of ridge
28071	RA	21/2	<u>Dolomitic Lime Mudstone</u> , light-brownish-grey and medium-grey weathered, light- to medium-brown fresh, micritic, thinly bedded <1cm to 10 cm thick, laminated/banded (some wavy), alternating resistant (siliceous(?), medium-grey fresh) and recessive beds; attitude of bedding 318°/32° NE
-		61⁄4	<u>offset</u>
28070	RA	3½	<u>Crinoid Ooid Grainstone</u> , as 28068, minor black matte specks, likely carbonaceous; top of interval is the top of cliff-forming rock and the start of recessive area, thinly bedded outcrop viewed stratigraphically above
28069	RA	21/2	Crinoid Ooid Grainstone, as 28068
28068	RA	13/4	Crinoid Ooid Grainstone, as 28066, moderately fractured/jointed
28067	RA	1½	Crinoid Ooid Grainstone, as 28064, visible gastropod(?)/bryozoan(?)
28066	RA	31/2	Crinoid Ooid Grainstone, as 28064, some fine-grained, joints seen throughout at 014°/63° E, variably spaced 5 cm to ¼ m
-		3/4	<u>offset</u>
28065	RA	21/2	Crinoid Ooid Grainstone, as 28064
28064	RA	23/4	Crinoid Ooid Grainstone, light-grey and tan weathered, medium-brownish-grey fresh, medium-grained, homogenous, weakly fractured, massive beds 10 cm to ¾ m thick, very good reaction with HCl, attitude of bedding 324°/28° NE
Section 2	<u>006-02</u> : (UT M	594798E, 5	789473N)
28008	RA	2½	Crinoidal Grainstone, as 28007, thin-bedded with some sections 2-5 cm thick over ½ m of stratigraphy, attitude of bedding at top 301°/40° NE; covered above but some platy very-fine grained limestone fleet/cultures a section and a -5 m below the top of sides line.
28007	RA	3	fine-grained limestone float/subcrop, section ends ~5 m below the top of ridge line <u>Crinoidal Grainstone</u> , medium-brownish-grey weathered and fresh, coarse-grained, crinoids, beds 15-40 cm thick, poorly cemented, more crumbly than down section, good reaction with HCI
28006	RA	3	<u>Crinoidal Grainstone</u> , light-brownish-grey, a bit darker up section, medium- to coarse-grained, beds 40-80 cm thick, good reaction with HCl

Interval	Formation Member	Strat. Thick. (m)	Description
28005	RA	3	<u>Crinoidal Grainstone</u> , light-brownish-grey weathered, light-tan-grey fresh, coarse-grained, grains 3-4 mm, massive
28004	RA	4	Crinoidal Grainstone, as 28003
28003	RA	31/2	<u>Crinoidal Grainstone</u> , light-grey weathered and fresh, coarse-grained, massive, good reaction with HCl
28002	RA	3½	<u>Crinoidal Grainstone</u> , light-grey, fine-to medium-grained, coarsens up section, massive <u>contact</u> ; sharp contact 304°/38° NE
28001	Banff	31/4	<u>Crinoidal Grainstone and Lime Mudstone</u> , dirty brown weathered, tan-grey fresh, micritic mudstone, beds 2-30 cm thick with intermittent thinner faint beds, fossiliferous, crinoid-rich, grainstone had better reaction with HCl than mudstone
28100	Banff	21/2	<u>Lime Mudstones</u> , light-brown or tan weathered, variable lithologies, partly micritic, some fine-grained, well-bedded 2 mm to 10 cm thick, a few continuous thin layers with iron oxide nodules 1-2 cm across, moderate to no reaction with HCl, attitude of bedding 310°/36° NE

Section 2006-03: (UTM 596465E, 5787795N)

28116	RA	4½	<u>Crinoidal Grainstone</u> , as 28110, light- and medium-brown fresh; rubble/subcrop continue ~10 m up hill
28115	RA	21/2	Crinoidal Grainstone, as 28110
28114	RA	21/2	<u>Crinoidal Grainstone</u> , as 28110, visible slickensides - no dependable surface for orientation measurement, attitude of bedding 291°/17° N, joint set 1 233°/03° NW, joint set 2 187°/70° W
28113	RA	2	<u>Lime Mudstone</u> , medium-grey weathered, medium-brown fresh, micritic to fine-grained, moderately fractured, well jointed (multiple sets), excellent reaction with HCl
-		1/2	<u>offset</u>
28112	RA	23/4	<u>Crinoidal Grainstone</u> , as 28110, minor mottled white fresh - weathered/altered?, well bedded, thinly bedded 1-15 cm thick, attitude of bedding 324°/28° NE
28111	RA	13/4	Crinoidal Grainstone, as 28110
_		21/2	offset
28110	RA	2¾	Crinoidal Grainstone, light- to medium-grey weathered, medium-greyish-brown fresh, very fine to fine-grained, minor medium-grained, crinoids, ooids/pellets, moderately fractured, well jointed, very good reaction with HCI, bedding(?) 312°/38° NE, joint set 1: 240°/~vertical NW, joint set 2: 324°/41° NE, joint set 3: 134°/~vertical SW, multiple episodes of structural deformation
28109	RA	1½	<u>Crinoidal Grainstone</u> , as 28107, some well fractured likely due to variable joint sets, mostly fine-grained, minor light-brown fresh
28108	RA	1	Crinoidal Grainstone, as 28107, possible bedding 300°/24° NE
28107	RA	2	Crinoidal Grainstone, as 28106, moderately fractured
28106	RA	21/4	Crinoidal Grainstone, as 28105, some medium-brown fresh
28105	RA	11⁄2	<u>Crinoidal Grainstone</u> , light- to medium-grey weathered, medium-brownish-grey fresh, grainy, fine- to medium-grained, massive, crinoid-rich, ooids?, corals, brachiopods, weakly fractured, minor random calcite veining, excellent reaction with HCl

Isolated Station: (UTM 596068E, 5787752N)

28101 RA

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Grainstone & Mudstone, tan weathered, medium-grey fresh, very fine to medium-grained, some micritic, crinoids, ooids, chert nodules, massive, 20 cm to ½ m beds, very weak to weak reaction with HCl

Isolated Station: SW Flank atop Baseline Ridge (UTM 595936E, 5787744N)

28075 RA

½ <u>Dolomitic Mudstone</u>, light-grey/whitish weathered, medium-brownish-grey fresh, cryptocrystalline to micritic, homogenous, beds ~1-10 cm thick, random rusty veins (weathered/oxidized pyrite?), very weak reaction with HCl, attitude of bedding 153°/33° SW

Interval	Formation	Strat.	Description
	Member	Thick. (m)
Section 2	2006-04: (UTM	596408F #	5787679N)
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28102	RA	4	Grainstone to Bindstone, light- to medium-grey weathered, light-brown and medium-brownish-grey fresh, fine- to medium-grained, minor very-fine-grained black specks (dolomite?), crinoids & ooids, large rugose and colonial corals throughout, bedding indeterminate, possible bedding 242°/18° NW, jointing 279°/78° N; boulders on surrounding slope, rubble and subcrop up hill
-		1/4	offset
28103	RA	3½	<u>Grainstone to Bindstone</u> , as 28102, more medium-brownish-grey fresh, less corals but still visible, hard to break, weak reaction with HCI, beds <20 cm, attitude of bedding 262°/21° N
Isolated 5	Station: (UTM	596438E.	5787616N)
28104	RA	1½	<u>Dolomitic Mudstone</u> , light-grey/whitish weathered, light-brown to medium-brownish-grey fresh, micritic to very-fine-grained, black carbonaceous(?) material scattered throughout, generally thinly bedded 1-15 cm thick, very weak to weak reaction with HCl, attitude of bedding 279°/06° N
Section 2	2 <u>006-05</u> : N sid	e of Fall Cr	reek (UTM 596833E, 5787070N)
28017	RA	2	<u>Grainstone</u> , as 28016, light- to medium-brownish-grey weathered and fresh, interbedded very fine and coarse-grained, beds 15-30 cm thick, excellent reaction with HCl, attitude of bedding 233°/03° NW
28016	RA	31/4	<u>Grainstone</u> , light-brownish-grey weathered, tan-brown fresh, very-fine-grained and medium- to coarse-grained interbeds, abundant calcite blebs up to 2 cm across, beds 15-30 cm thick, attitude of bedding at top 220°/07° NW
28015	RA	3½	<u>Grainstone</u> , light- and medium-grey weathered, greyish-brown fresh, coarse- to very-coarse-grained, massive beds
28014	RA	21/2	Grainstone, sharp contact with 28013, light-grey weathered and fresh, fine- to medium-grained, abundant calcite blebs to 2 cm, moderately fractured, beds 5-20 cm thick, well jointed, vertical jointing spaced 2 mm to 1 cm, joint set 1: 136°/vertical SW, joint set 2: 338°/83° NE, joint set 3: 279°/73° N, joint set 4: 187°/65° W
28013	RA	11⁄4	Crinoidal Grainstone, as 28012, smooth surfaces on outcrop, very weakly fractured, attitude of bedding 154°/11° SW
28012	RA	3	<u>Crinoidal Grainstone</u> , as 28011, light-grey weathered, light-greyish-brown fresh, massive with a few beds 10-40 cm thick
28011	RA	4	<u>Crinoidal Grainstone</u> , as 28010, light-grey-tan, fine- to medium-grained, some chips are medium-greyish-brown fresh - more crystalline and sugary texture, more well-cemented, massive
28010	RA	3	<u>Crinoidal Grainstone</u> , light-greyish-brown weathered and fresh, coarse-grained, crumbly, rusty fractures sub-parallel to bedding giving the appearance of beds 5-30 cm thick, calcite filled fractures, good reaction with HCl, attitude of bedding 190°/03° W; base of cliff section near anticline axis
leolated	Station: (IITM	596741F	5787024N)
28009	<u>Station</u> : (UTM RA	4	Dolomitic Limestone, light-grey, fine-grained, resistant, vuggy, bitumen-filled vugs, slight fetid odor, 1-2% bitumen content, beds 5-20 cm thick, attitude of bedding 206°/09° NW, 190°/09° W

